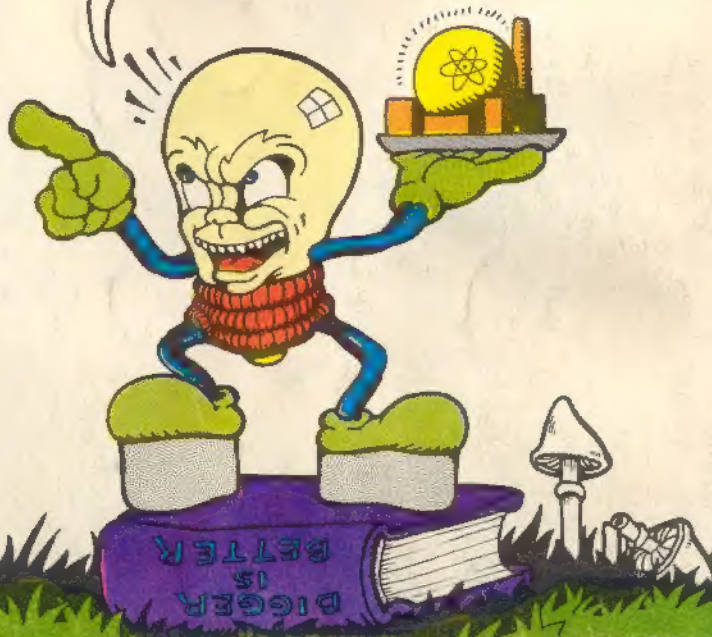


ALL-ATOMIC COMICS

75¢

IS NUCLEAR
POWER THE
ANSWER?

KID, I'D BET
YOUR *LIFE*
ON IT!



PREFACE

WHEN I STARTED WORKING ON THIS BOOK IN LATE 1974 I THOUGHT I WAS GOING TO DO A "BALANCED" DISCUSSION OF NUCLEAR POWER PRESENTING BOTH SIDES. I DECIDED AGAINST THIS.

THE ARGUMENTS IN FAVOR OF NUCLEAR POWER ARE WELL-KNOWN AND CLEVERLY PROMOTED IN MULTI-MILLION DOLLAR ADVERTISING CAMPAIGNS. THE ARGUMENTS AGAINST NUCLEAR POWER ARE NOT AS WELL-KNOWN AND ARE UNABLE TO AFFORD EXPENSIVE PROMOTION.

WHAT IS MORE IMPORTANT, HOWEVER, IS THAT THE ARGUMENTS FOR NUCLEAR POWER ARE OFTEN FALSE, DOUBTFUL, OR MISLEADING WHILE THE ARGUMENTS AGAINST NUCLEAR POWER RAISE VERY SERIOUS QUESTIONS.

SOME MAY THINK THAT IT IS IRRESPONSIBLE FOR ME TO PRESENT AN ARGUMENT WHICH CASTS DOUBT ON NUCLEAR POWER IN COMIC BOOK FORM. I'LL ADMIT THAT THE LIMITATIONS OF SPACE HAVE KEPT ME FROM PRESENTING THE ARGUMENT AS FULLY AS I WOULD LIKE BUT FOR READERS WHO DESIRE MORE SUPPORTING EVIDENCE I HAVE SUPPLIED A BIBLIOGRAPHY. THE PRO-ATOMIC POWER COMIC BOOKS WHICH THE NUCLEAR INDUSTRY HAS SPONSORED HAVE OFTEN BEEN OUTRAGEOUSLY IRRESPONSIBLE IN THEIR SIMPLISTIC ADVOCACY OF A NEW AND HIGHLY QUESTIONABLE TECHNOLOGY.

I'D LIKE TO THANK JIM AUGUSTYN, JIM HARDING, MIKE SHUMAN, SHELBY SAMPSON, ALICE, PHIL, AND CHARLY, THE CALIFORNIANS FOR NUCLEAR SAFEGUARDS INCLUDING DWIGHT, LORRIE, KEN, AND CELIA, THE CARTOONISTS WHO DREW THE FUN FACTS, THE OTHERS WHO HAVE HELPED ME, THE AUTHORS WHO HAVE INSPIRED ME, AND ANYONE CAREFUL ENOUGH TO READ ALL THIS FINE PRINT.

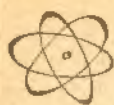
THIS WHOLE BOOK IS PROTECTED BY COPYRIGHT BUT PERMISSION IS GRANTED TO REPRINT PARTS OF IT IN ANY WAY THAT MIGHT HELP SPREAD THESE IDEAS. I WOULD APPRECIATE IT IF ANYONE REPRINTING THIS MATERIAL WOULD MENTION THAT "THIS IS AN EXCERPT FROM **ALL-ATOMIC COMICS**, AVAILABLE FROM **EDUCOMICS**, P.O. BOX 40246, SAN FRANCISCO, CALIFORNIA, 94140 FOR \$1.00 A SINGLE COPY."

I'VE TRIED TO MAKE CERTAIN THAT ALL THE INFORMATION IN THIS COMIC BOOK IS UP-TO-DATE AND TRUE. I'M RESPONSIBLE FOR ALL THE CONTENTS.
LEONARD RIFAS
SEPTEMBER, 1976

NUCLEAR POWER REACTORS IN THE UNITED STATES

• OPERABLE, BEING BUILT, OR
PLANNED (AS OF 12-31-75)

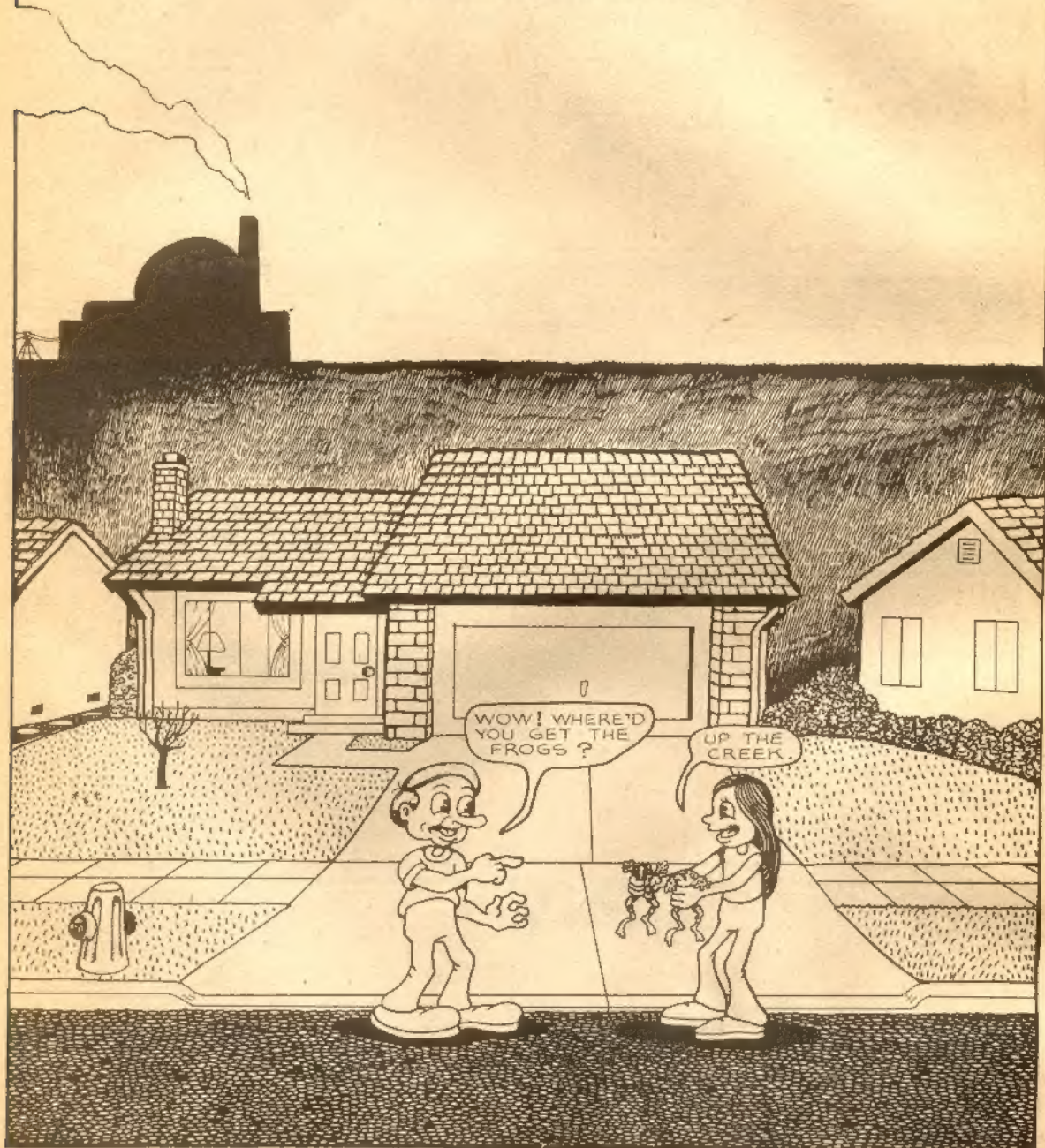




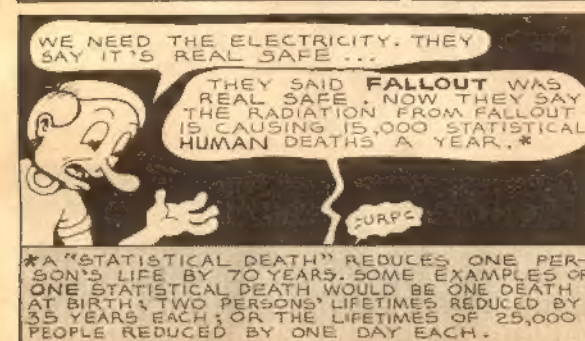
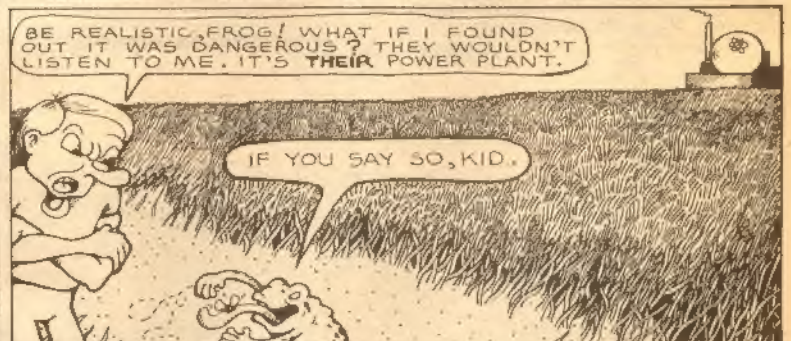
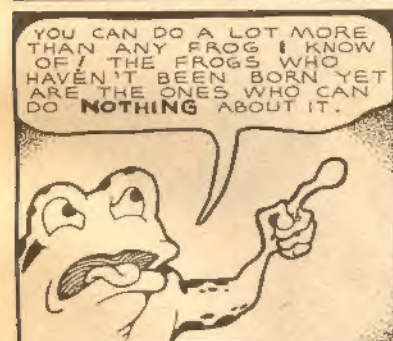
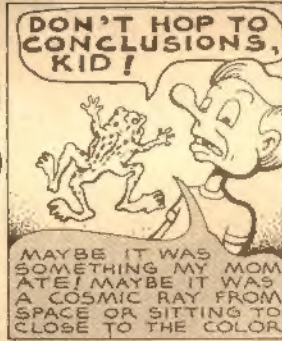
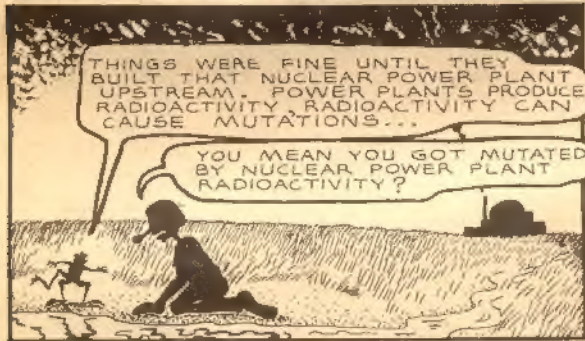
ATOMICOMICS



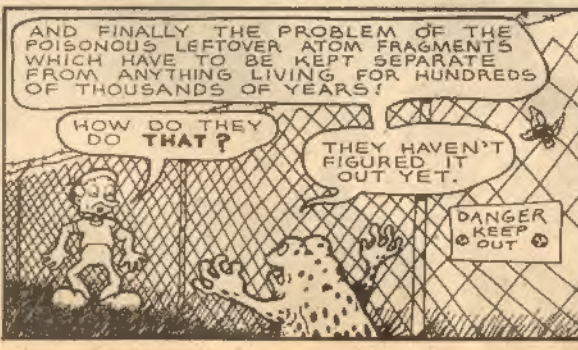
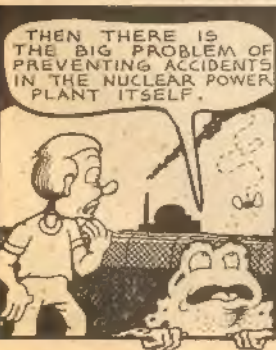
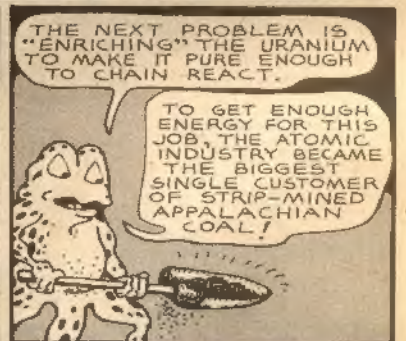
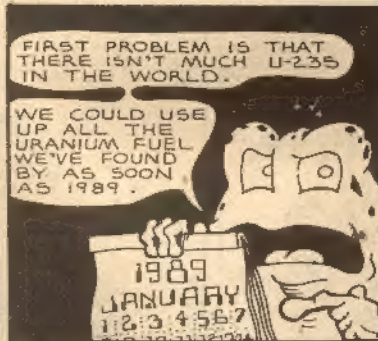
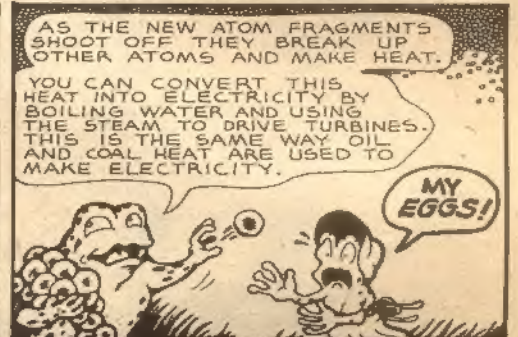
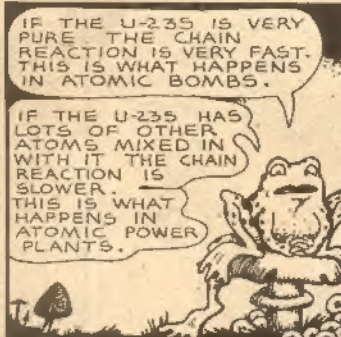
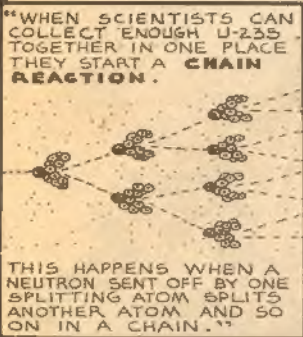
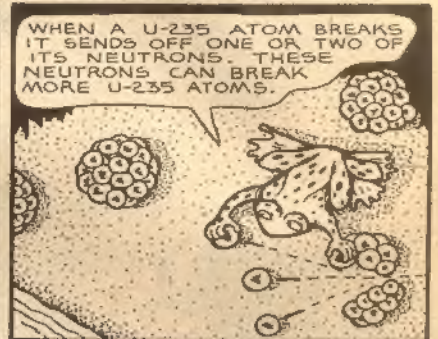
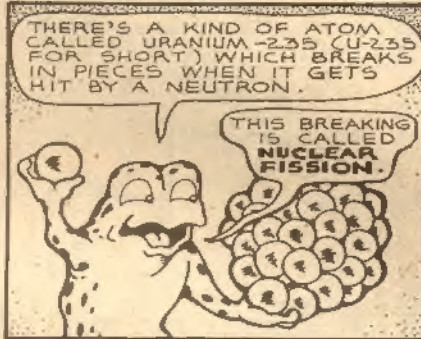
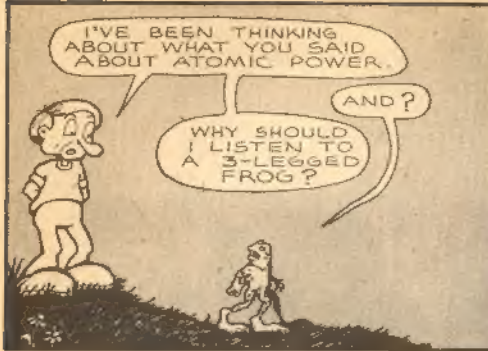
DOES NUCLEAR POWER CREATE MORE PROBLEMS THAN IT SOLVES? SOME PROBLEMS WITH NUCLEAR POWER ARE THE DANGERS OF RADIOACTIVE POLLUTION, THE MASS PRODUCTION OF MATERIALS THAT CAN BE MADE INTO ATOMIC BOMBS, AND THE HUGE CONCENTRATIONS OF WEALTH THAT NUCLEAR POWER REQUIRES. HOW SERIOUS ARE THESE PROBLEMS? WE HAVE A RIGHT TO KNOW. FOR MANY OF US, NUCLEAR POWER IS ALREADY IN OUR OWN BACKYARDS...



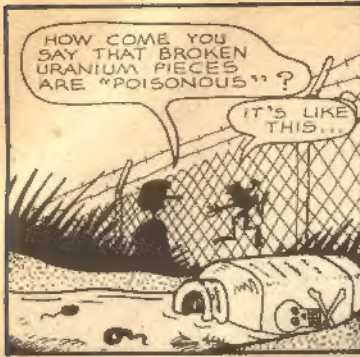
A FROG



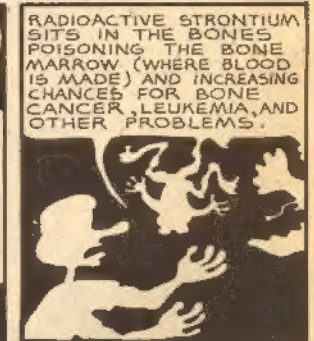
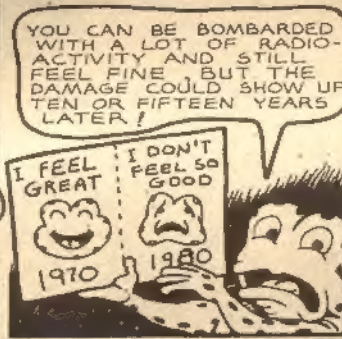
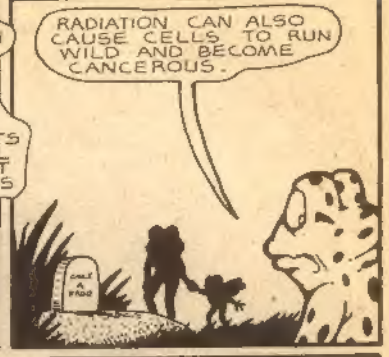
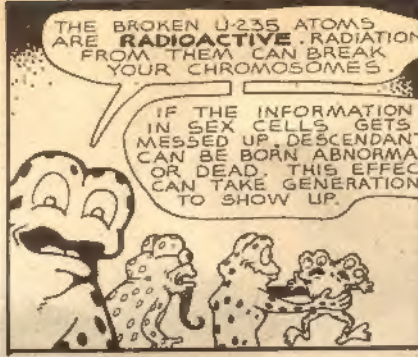
HOW IT WORKS



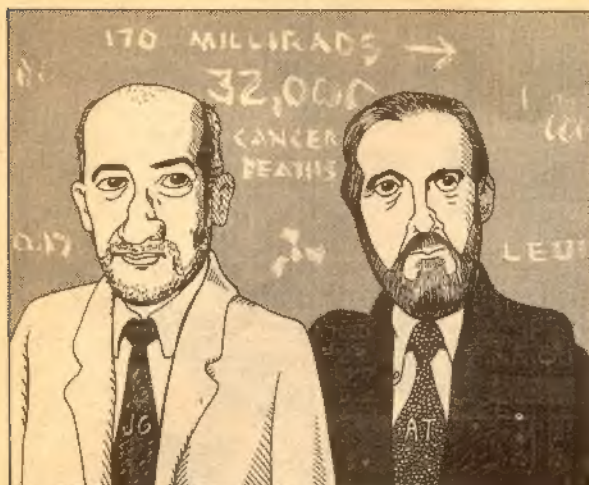
RADIATION



IT'S LIKE THIS...



FUN FACTS TO KNOW AND TELL ABOUT NUCLEAR POWER



SAFETY STANDARDS

JOHN GOFMAN AND ARTHUR TAMPLIN WHILE WORKING FOR THE ATOMIC ENERGY COMMISSION CALCULATED THAT IF EVERYONE IN THE U.S. RECEIVED WHAT WAS THEN CALLED A "SAFE" DOSE OF RADIATION, IT WOULD CAUSE 32,000 EXTRA CANCER DEATHS PER YEAR. THEIR STUDIES FINALLY LED TO THE AEC TIGHTENING THEIR RADIATION STANDARDS. THE NEW STANDARDS ONLY PERMIT 1% OF THE OLD ALLOWANCES. NEW RESEARCH BY DR. EDWARD A. MARTELL IS INDICATING THAT THESE NEW STANDARDS MAY STILL GRIEVOUSLY UNDERESTIMATE THE RADIATION HAZARD OF NUCLEAR POWER. THE GOVERNMENT SAFETY STANDARDS DON'T DISTINGUISH BETWEEN GAMMA, BETA, AND ALPHA RADIATION. MARTELL'S STUDIES SHOW THAT ALPHA RADIATION (THE KIND PLUTONIUM EMITS) MIGHT BE THE PRINCIPAL CAUSE OF RADIATION-INDUCED CANCER IN MAN. THIS WOULD MEAN THAT NUCLEAR POWER IS AN UNACCEPTABLE HEALTH HAZARD.

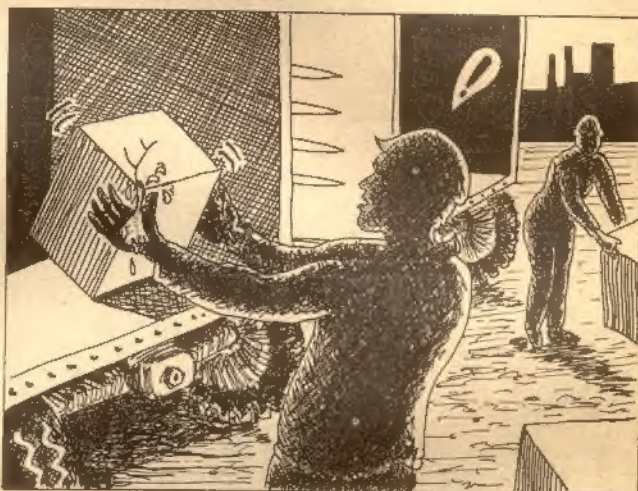
ILLUSTRATED BY LEONARD RIFAS

FUN FACTS TO KNOW AND TELL ABOUT NUCLEAR POWER

CAUSE AND EFFECT

IN 1963, EDWARD J. GLEASON JR., A NEW JERSEY TRUCK DOCK WORKER, ACCIDENTALLY SPILLED PLUTONIUM ON HIMSELF WHILE HANDLING A LEAKING, UNMARKED BOX OF LIQUID WASTE. SHORTLY AFTERWARDS HE COMPLAINED OF FEELING ILL. FOUR YEARS LATER HIS HAND AND THEN HIS ARM AND SHOULDER WERE AMPUTATED BECAUSE OF A RARE FORM OF CANCER, FROM WHICH HE DIED IN 1973 AT THE AGE OF 39. WHEN GLEASON HAD TRIED TO SUE THE COMPANY, THE COMPANY INSURERS ARGUED THAT HE COULD NOT PROVE A DIRECT LINK BETWEEN THE SPILL AND THE CANCER.

ILLUSTRATED BY PETER WEBER



FUN FACTS TO KNOW AND TELL ABOUT NUCLEAR POWER

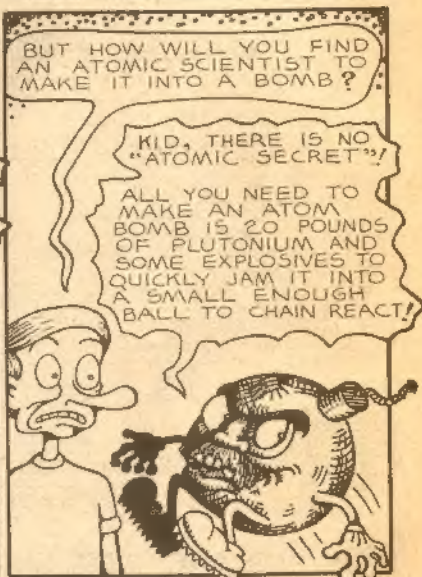
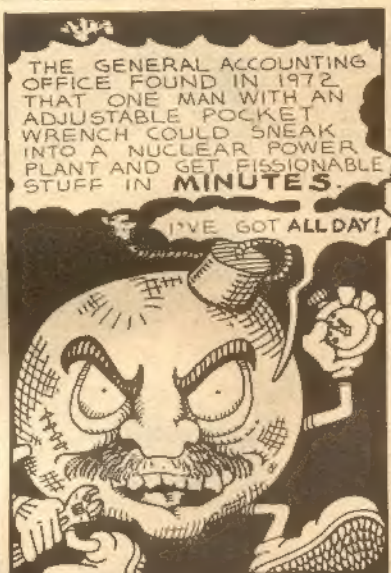
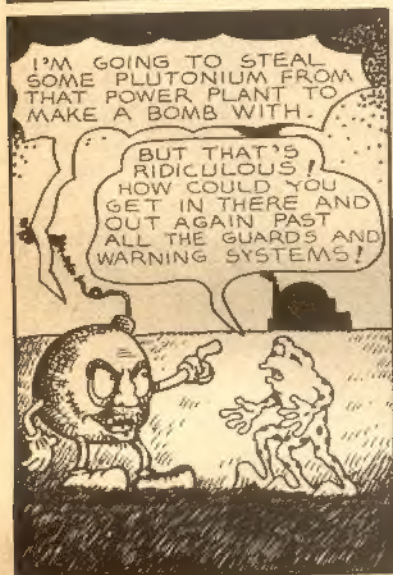
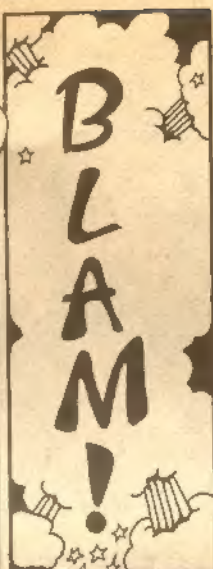
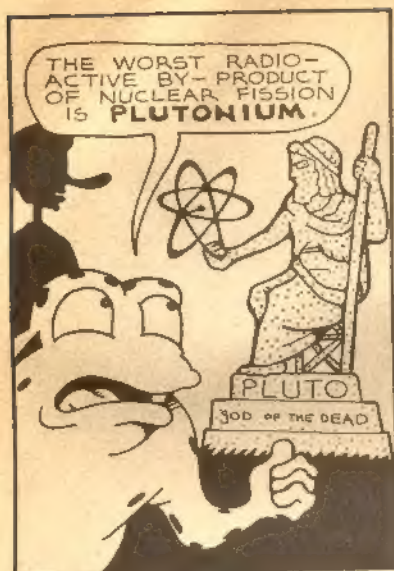
A RADIOACTIVE FOOD CHAIN

TESTING ATOM BOMBS BY EXPLODING THEM IN THE ATMOSPHERE USED TO CREATE A RADIATION HAZARD SIMILAR TO THE HAZARDS OF NUCLEAR POWER. RADIOACTIVITY, THE ATOMIC SCIENTISTS DID NOT ANTICIPATE HOW THE RADIOACTIVE FALLOUT WOULD BEHAVE. INSTEAD OF SPREADING EVENLY OVER THE GLOBE IT FOLLOWS THE AIR CURRENTS, THEREBY DEPOSITING MORE FALLOUT OVER THE NORTH TEMPERATE ZONE THAN NEAR THE POLES OR THE EQUATOR. SCIENTISTS DISCOVERED, HOWEVER, THAT EVEN THOUGH LESS FALLOUT WAS FALLING IN THE ARCTIC, THE ESKIMOS THERE WERE RECEIVING DANGEROUSLY HIGHER DOSES OF RADIOACTIVITY THAN THE PEOPLE IN THE TEMPERATE ZONE. THIS WAS BECAUSE THE ARCTIC FOOD CHAIN WAS CONCENTRATING THE FALLOUT. THE LICHENS WERE EXTREMELY EFFICIENT COLLECTORS OF FALLOUT AND ALSO ONE OF THE PRINCIPAL FOODS OF THE CARIBOU. THE CARIBOU, IN TURN, ARE AN IMPORTANT FOOD OF THE ESKIMOS.

ILLUSTRATED BY SHELBY SAMPSON



TERRORISM

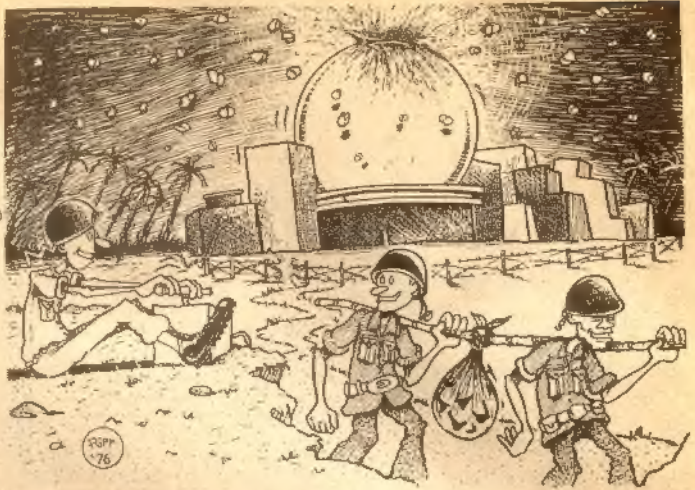


WHEN ATOMIC BOMBS
ARE OUTLAWED
ONLY OUTLAWS WILL
HAVE ATOMIC BOMBS

FUN FACTS TO KNOW AND TELL ABOUT NUCLEAR POWER

U.S. DESTROYS VIET A-PLANT

AS THE SOUTH VIETNAMESE ARMY RETREATED IN APRIL 1975, A TEAM OF AMERICANS SECRETLY FLEW TO SOUTH VIETNAM AND DESTROYED THAT COUNTRY'S ONLY NUCLEAR POWER PLANT. THEY REMOVED THE NUCLEAR FUEL AND SENT IT BACK TO THE U.S. SO THE NORTH VIETNAMESE COULD NOT CAPTURE IT AND USE IT TO MAKE AN ATOM BOMB. THEN THEY DYNAMITED THE REACTOR BUILDING.



ILLUSTRATED BY LARRY RIPPEE

FUN FACTS TO KNOW AND TELL ABOUT NUCLEAR POWER

ATOMIC GANGSTERS



ACCORDING TO A U.S. ARMY PHYSICAL SECURITY REVIEW BOARD REPORT RELEASED IN 1975, "ORGANIZED CRIMINAL ELEMENTS" HAVE STOLEN THOUSANDS OF AMERICAN MILITARY WEAPONS AND EXPLOSIVES IN THE U.S. AND ABROAD. SOME OF THESE STOLEN ARMS WERE SOLD TO CRIMINALS AND TERRORISTS FOR "HUGE PROFITS". THIS MEANS THAT A PRECEDENT HAS BEEN ESTABLISHED THAT MIGHT LEAD TO A REGULAR NUCLEAR BLACK MARKET (IF IT HAS NOT DONE SO ALREADY).

ILLUSTRATED BY KEVIN BRADY

FUN FACTS TO KNOW AND TELL ABOUT NUCLEAR POWER

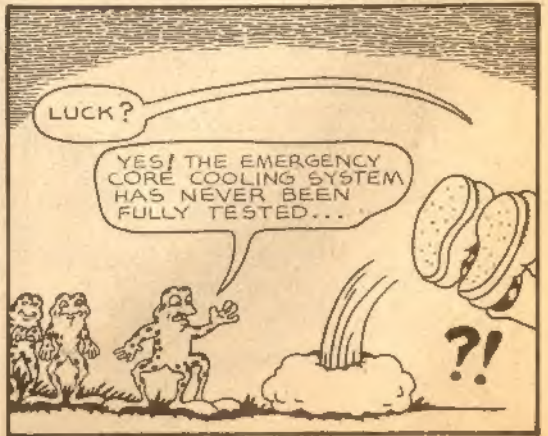
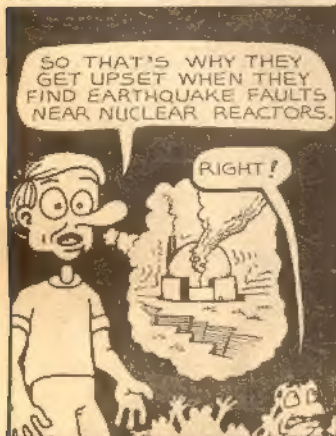
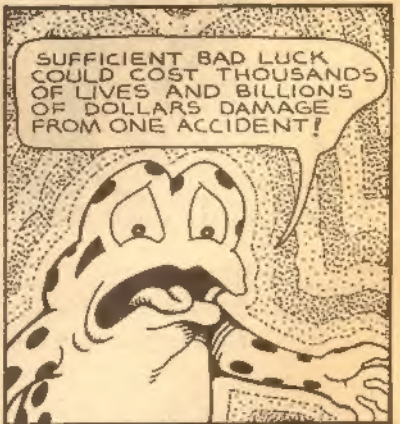
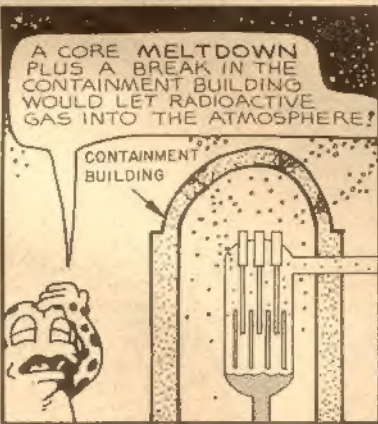
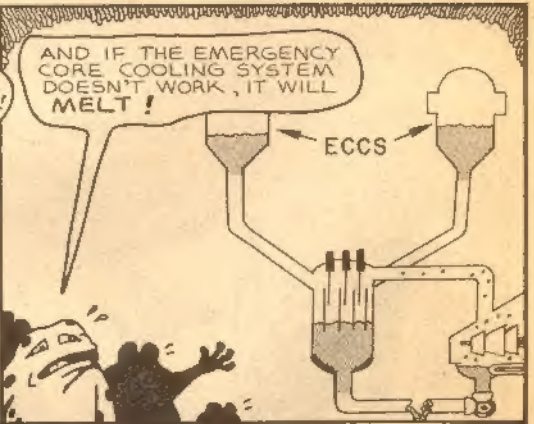
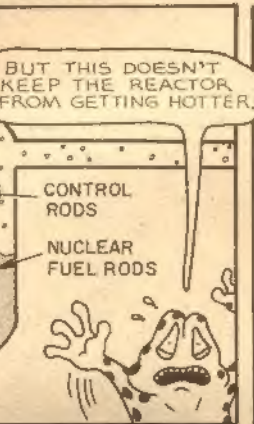
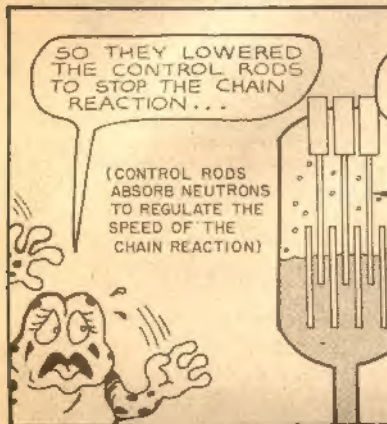
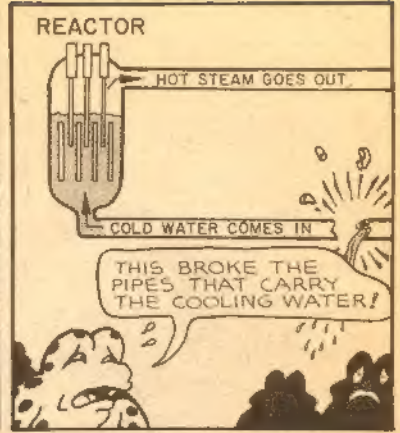
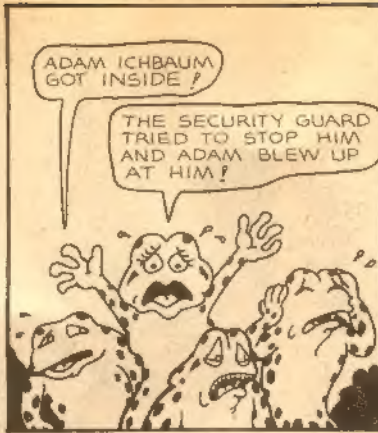
NUCLEAR BLACKMAIL

ONE OF THE BIGGEST WORRIES CONCERNING THE NUCLEAR POWER PROGRAM IS THAT FISSIONABLE MATERIAL COULD BE STOLEN AND MADE INTO ATOM BOMBS. ENTIRE CITIES COULD BE THREATENED WITH DESTRUCTION UNLESS THE BLACKMAILER'S DEMANDS WERE MET. IN 1970 A BLACKMAILER THREATENED TO BLOW UP ORLANDO, FLORIDA UNLESS HE WAS PAID ONE MILLION DOLLARS AND GIVEN SAFE ESCORT OUT OF THE COUNTRY. THE DEMAND WAS BACKED UP BY A CONVINCING DIAGRAM OF AN ATOMIC BOMB. THE MONEY WAS COLLECTED BUT BEFORE IT WAS PAID THE POLICE CAPTURED THE "TERRORIST" HE TURNED OUT TO BE A 14-YEAR OLD SCIENCE HONORS STUDENT.

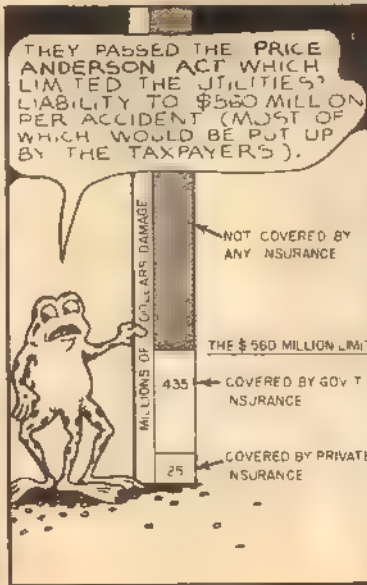
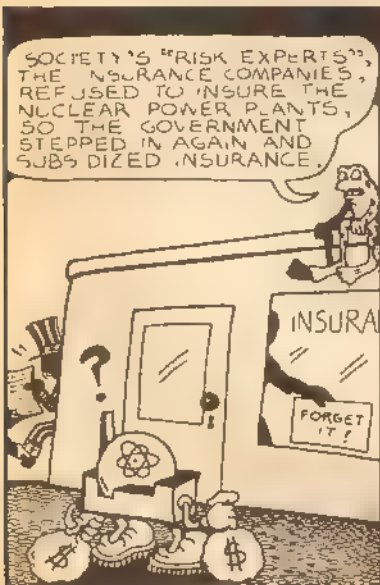
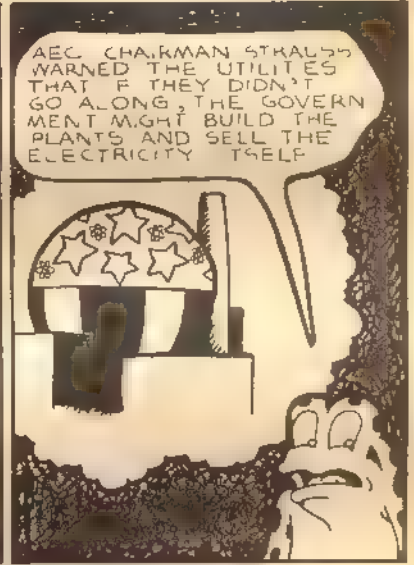
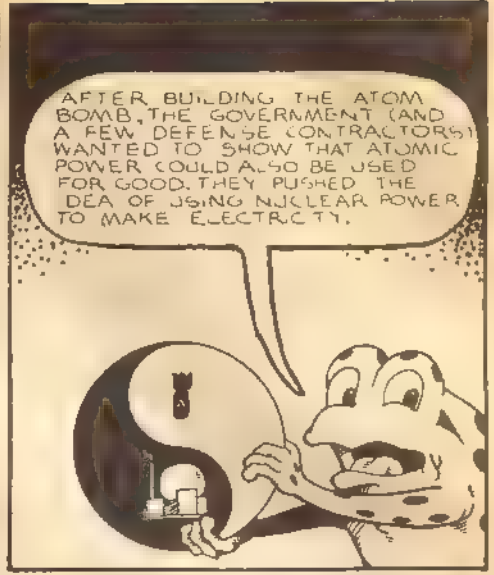
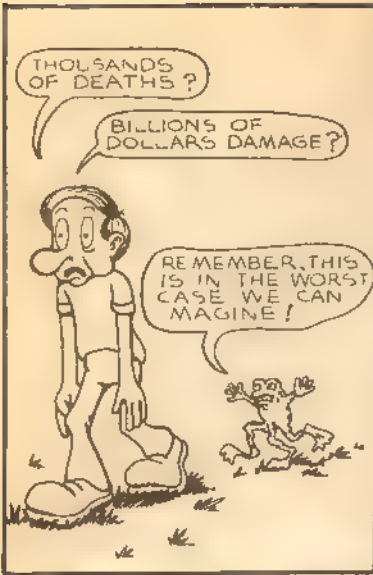
ILLUSTRATED BY MELINDA GEBBIE



SAFETY



INSURANCE



STORY CONTINUED AFTER NEXT TWO PAGES

FUN FACTS TO KNOW AND TELL ABOUT NUCLEAR POWER



FERMI

ON OCTOBER 5, 1960, THE ENRICO FERMI ATOMIC POWER PLANT HAD AN ACCIDENT AND PART OF THE FUEL MELTED. THIS COULD HAVE LED TO AN EXPLOSION WHICH WOULD HAVE RELEASED RADIOACTIVE GAS INTO THE ATMOSPHERE. FORTUNATELY THIS DIDN'T HAPPEN. IF IT HAD, THE ONLY REMAINING SAFETY PRECAUTION WOULD HAVE BEEN TO EVACUATE THE SURROUNDING AREA, INCLUDING DETROIT, MICHIGAN.

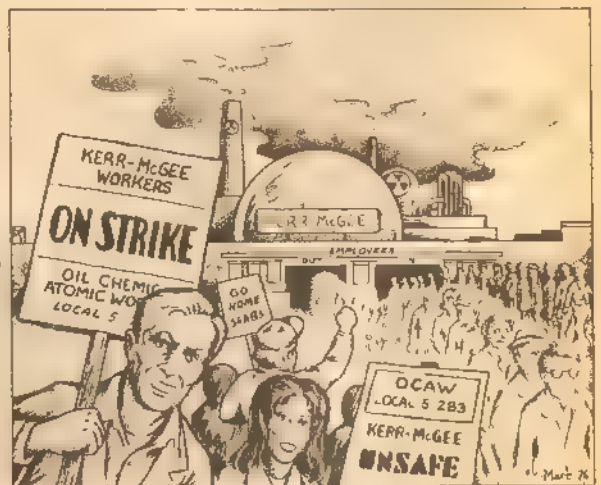
ILLUSTRATED BY ROGER MAY

FUN FACTS TO KNOW AND TELL ABOUT NUCLEAR POWER

PROFIT VS. SAFETY

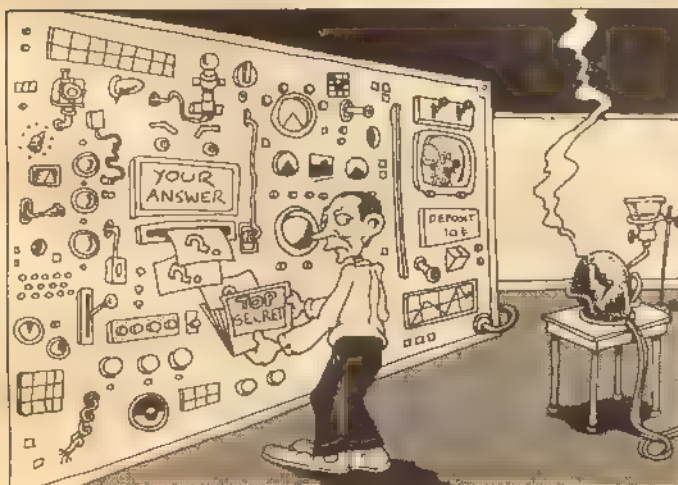
IN 1972, THE PLUTONIUM WORKERS AT KERR-McGEE'S CAMMARON RIVER PLUTONIUM PLANT WENT ON STRIKE. THEY WERE DEMANDING A NEW CONTRACT WITH HIGHER WAGES, SAFER WORKING CONDITIONS, AND BETTER TRAINING. AS SOON AS THE WORKERS WENT ON STRIKE, THE COMPANY RUSHED SCABS ONTO THE JOB. KERR-McGEE OFFICIALS LATER ADMITTED THAT THRUSTING UNTRAINED STRIKEBREAKERS INTO THE PLANT HAD LED TO MORE PLUTONIUM SPILLS AND LEAKS.

ILLUSTRATED BY MARC MIYASHIRO



FUN FACTS TO KNOW AND TELL ABOUT NUCLEAR POWER

THE E.C.C.S.



A NUCLEAR REACTOR MUST CONSTANTLY BE COOLED BY WATER TO KEEP IT FROM MELTING AND CAUSING AN ENORMOUSLY EXPENSIVE AND POTENTIALLY DISASTROUS ACCIDENT. IN CASE THE WATER FAILS TO KEEP COMING, NUCLEAR POWER PLANTS ARE SUPPLIED WITH AN EMERGENCY BACKUP SYSTEM CALLED THE ECCS (EMERGENCY CORE COOLING SYSTEM). IN 1970, THE AEROMET NUCLEAR COMPANY RAN SIX TESTS OF THE ECCS USING A MINIATURE MODEL REACTOR CORE. IN EVERY TEST THE COMPUTER FAILED TO PREDICT HOW THE MODEL WOULD REACT. THESE TEST FAILURES WERE KEPT SECRET NO ONE KNOWS WHETHER THE ECCS IS RELIABLE.

ILLUSTRATED BY LARRY AND LEONARD

SAFETY QUIZ

ON THE LEFT, LISTED ALPHABETICALLY, ARE THE NAMES OF FIVE NUCLEAR REACTORS. ON THE RIGHT, LISTED CHRONOLOGICALLY, ARE DESCRIPTIONS OF FIVE NUCLEAR ACCIDENTS. TRY TO MATCH THE ACCIDENTS TO THE REACTORS WHERE THEY OCCURRED. DON'T WORRY ABOUT GETTING THEM ALL RIGHT. WE ALL MAKE MISTAKES....

FOR ANSWERS TURN
THIS PAGE UPSIDE DOWN



Rupp '76

1. BROWN'S FERRY (IN ALABAMA)

2. ENRICO FERMI ATOMIC POWER PLANT (IN MICHIGAN)

3. NRX (IN CANADA) EXPERIMENTAL REACTOR AT CHALK RIVER

4. SL-1 (IN IDAHO)



5. WINDSCALE (IN ENGLAND)

A. 12-12-52 OVER A MILLION GALLONS OF HIGHLY RADIOACTIVE WATER FLOODED THE BASEMENT OF THE REACTOR BUILDING.

B. 10-12-57 LARGE AMOUNTS OF RADIOACTIVITY ESCAPED. MILK FROM 200 SQUARE MILES OF NEIGHBORING FARMLAND WAS DESTROYED.

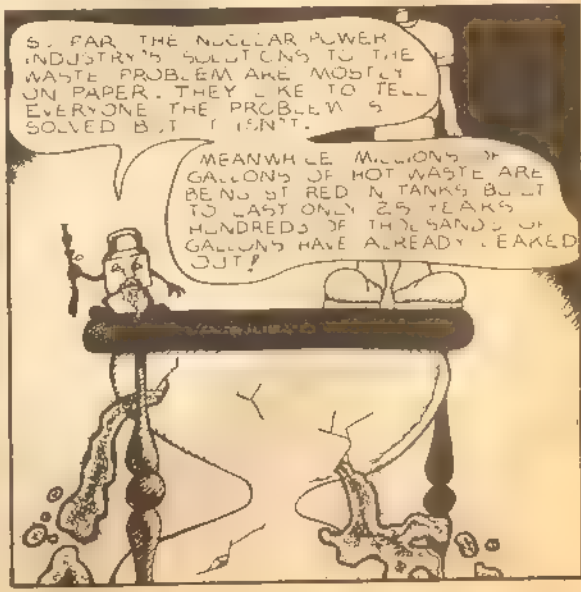
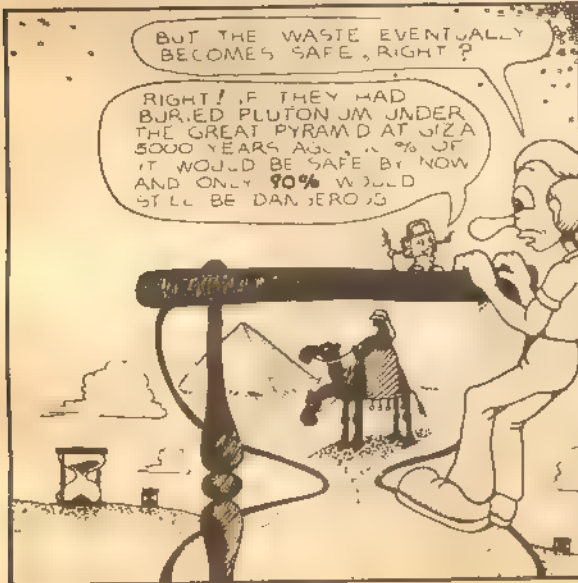
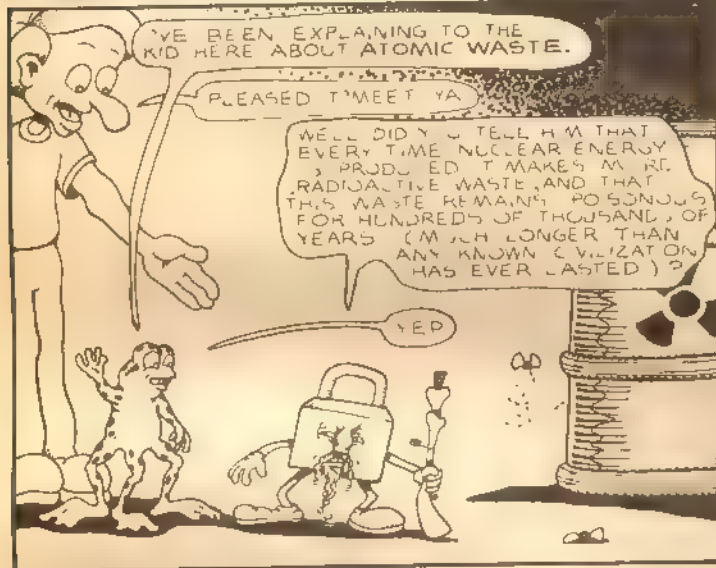
C. 1-3-61 A REACTOR EXPLODED KILLING THREE NUCLEAR TECHNICIANS.

D. 10-5-66 SODIUM COOLANT WAS BLOCKED AND SOME URANIUM FUEL MELTED. "WE ALMOST LOST DETROIT."

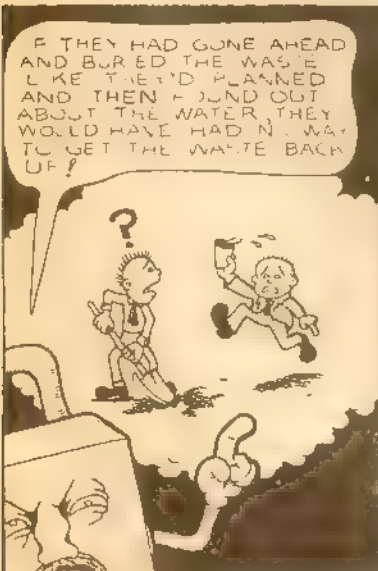
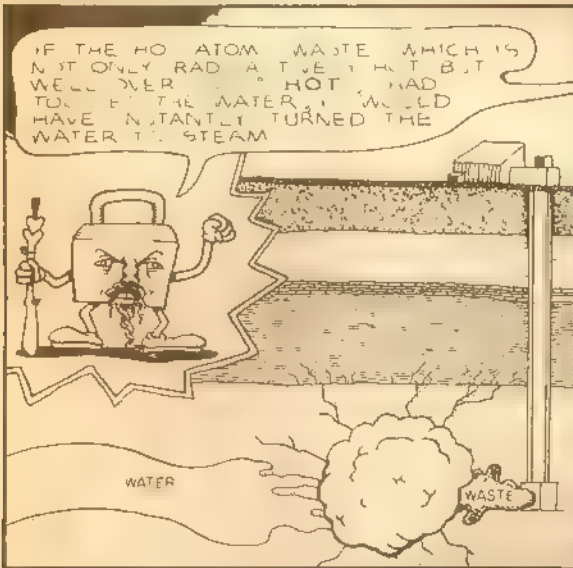
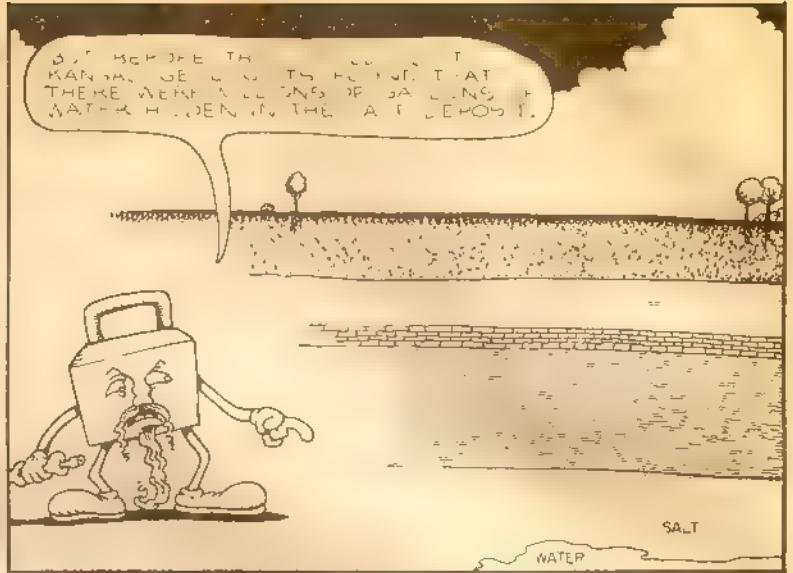
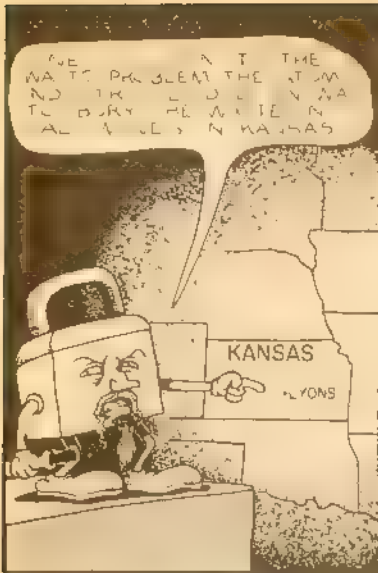
E. 3-22-75 A CANDLE STARTED A FIRE WHICH DISABLED MANY SAFETY FEATURES AT THE PLANT.

ANSWERS:
1E 2D 3A 4C 5B

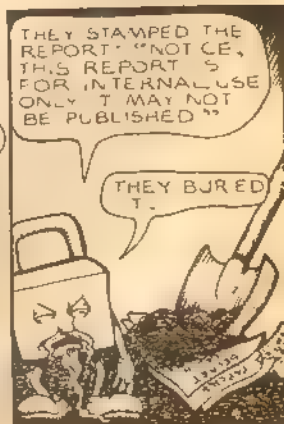
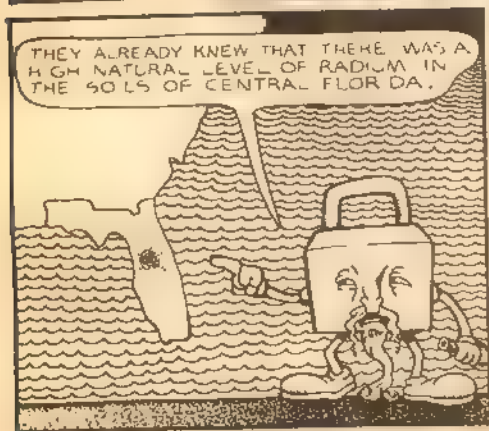
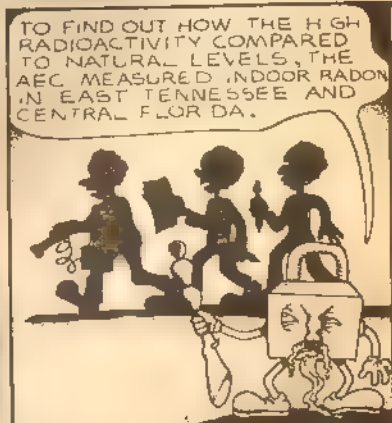
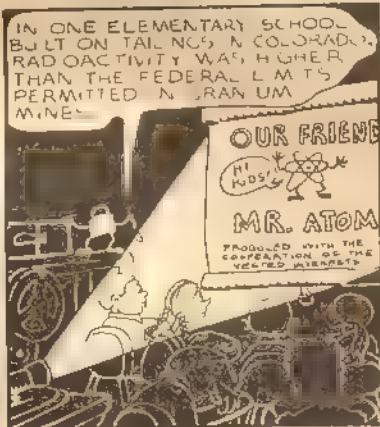
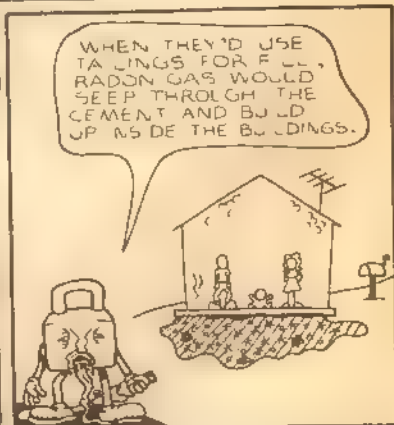
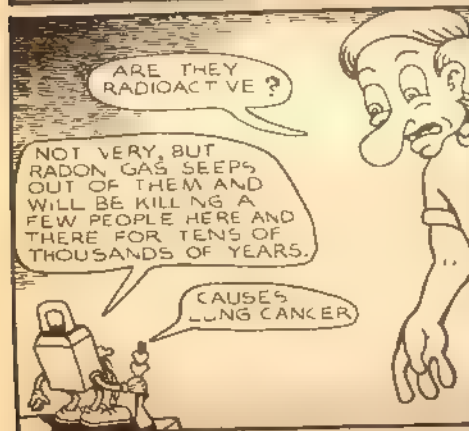
WASTE



SALT



TAILINGS



STORY CONTINUED AFTER NEXT PAGE

FUN FACTS TO KNOW AND TELL ABOUT NUCLEAR POWER



A CONFLICT OF INTEREST

OF THE 6000 MEN WHO HAVE BEEN URANIUM MINERS IN THIS COUNTRY, AN ESTIMATED 600 TO 1100 WILL DIE OF LUNG CANCER BECAUSE OF RADIATION EXPOSURE ON THE JOB. HUNDREDS OF THESE DEATHS COULD HAVE BEEN AVOIDED BY VENTILATING THE MINES TO KEEP THE RADON GAS FROM ACCUMULATING. THE ATOMIC ENERGY COMMISSION HAD INFORMATION THAT THE UNVENTILATED MINES WOULD CAUSE UNNECESSARY CANCERS BUT THEY CONCEALED THE DANGERS. THEY WERE THE ONLY CUSTOMER FOR THE URANIUM AND EXTRA SAFETY MEASURES WOULD HAVE INCREASED THE COSTS OF THE URANIUM THEY WERE BUYING.

ILLUSTRATED BY MORIA WRIGHT

FUN FACTS TO KNOW AND TELL ABOUT NUCLEAR POWER

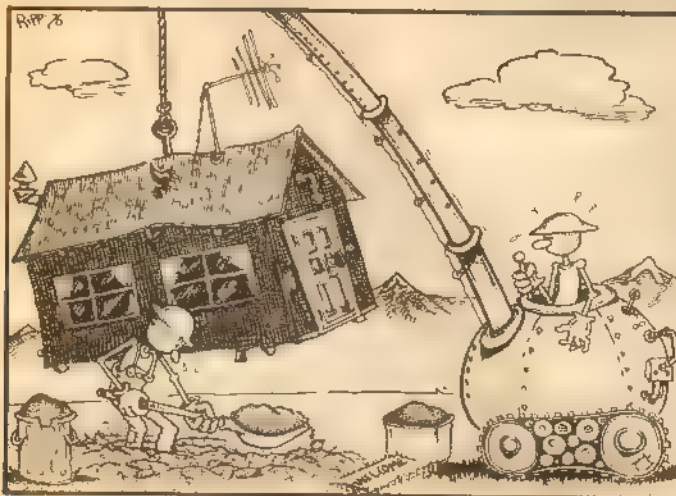
FROG LEGS

THE AMSTERDAM NUCLEAR RESEARCH INSTITUTE DUMPED ITS NUCLEAR WASTE IN A DITCH. DR. D. HILLENBOM OF THIS INSTITUTE REPORTEDLY FOUND FROGS IN THIS DITCH WITH EXTRA LEGS AND OTHER MUTATIONS. SIMILAR REPORTS OF MUTATION HAVE APPEARED IN THE U.S., JAPAN, AND CANADA.

ILLUSTRATED BY LEONARD RIFAS



FUN FACTS TO KNOW AND TELL ABOUT NUCLEAR POWER

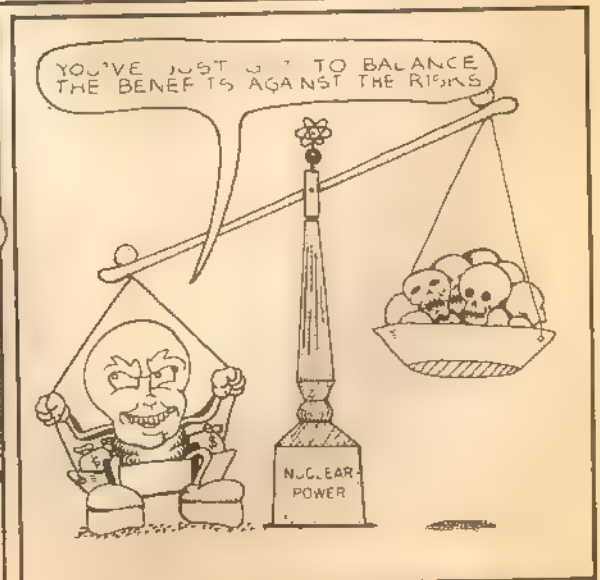
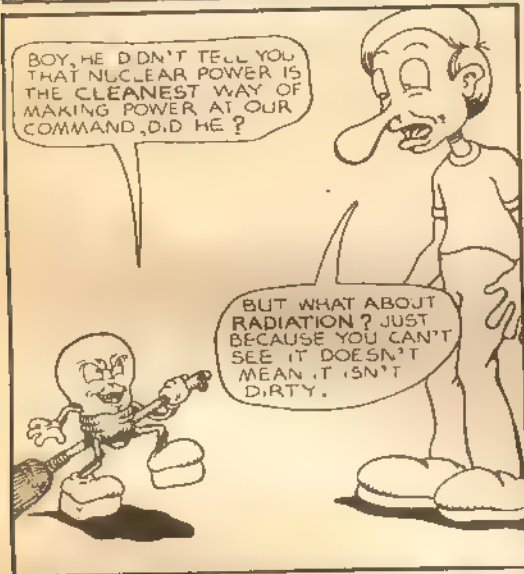


TAILINGS

WHEN THEY MINE URANIUM 99% OF WHAT THEY DIG UP IS LEFT OVER AS SANDY, GRAY, SLIGHTLY RADIOACTIVE WASTE CALLED TAILINGS. BETWEEN 1953 AND 1966, 8000 BUILDINGS IN COLORADO WERE BUILT WITH TAILINGS IN OR AROUND THEIR FOUNDATIONS. BY 1976 \$11 MILLION HAD BEEN SPENT TO REMOVE THE RADIOACTIVE SAND FROM UNDER THESE BUILDINGS AS A HEALTH PRECAUTION. DAVID COMEY HAS CALCULATED THAT THE RADIOACTIVE DECAY OF THESE TAILINGS WILL CAUSE 394 CANCER DEATHS PER GIGAWATT-YEAR OF ELECTRICITY COMPARED TO ABOUT 50 DEATHS PER GIGAWATT-YEAR FROM SULFUR OXIDE EMISSIONS FROM COAL POWER PLANTS.

ILLUSTRATED BY LARRY RIPPET

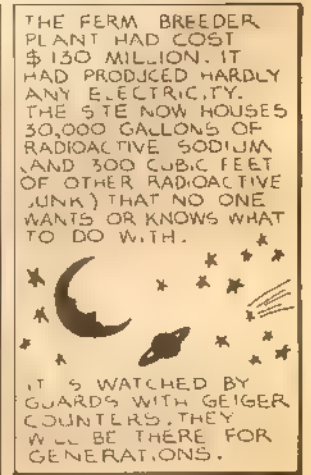
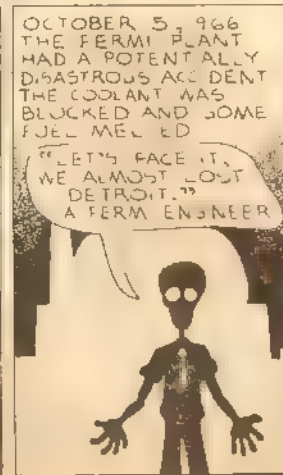
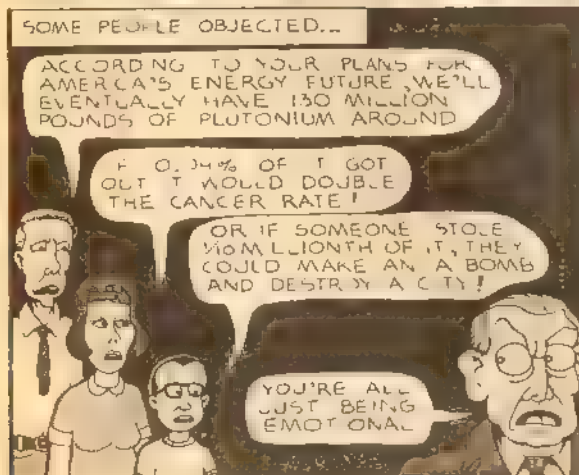
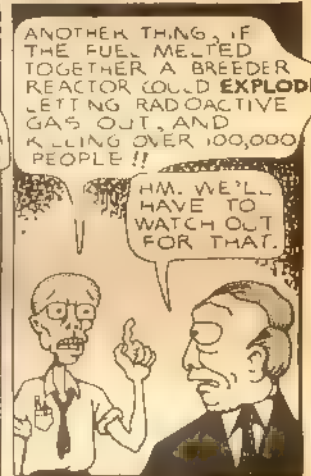
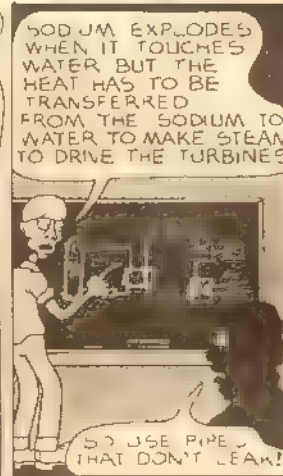
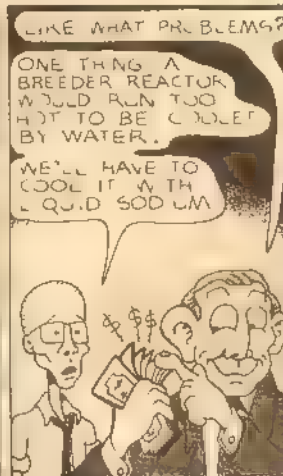
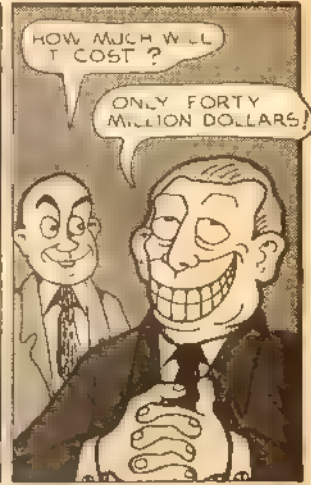
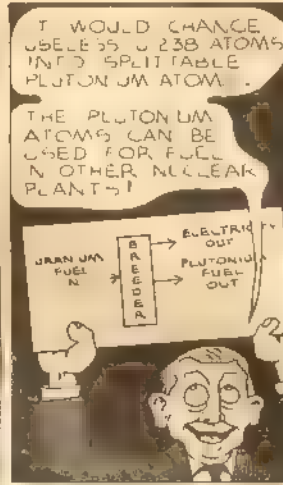
GREEDY



EVERYONE AGREES THAT A NUCLEAR POWER PLANT CAN NOT EXPLODE LIKE A BOMB. THERE IS, HOWEVER, A SPECIAL KIND OF EXPERIMENTAL REACTOR CALLED A "BREEDER" WHICH SOME PEOPLE THINK COULD EXPLODE. BREEDERS WOULD CREATE PLUTONIUM. THE GOVERNMENT IS CURRENTLY SPENDING A LOT TO DEVELOP BREEDERS BECAUSE UNLESS THE NUCLEAR PEOPLE CAN CREATE A PLUTONIUM FUEL SUPPLY, THEIR WHOLE NUCLEAR POWER INDUSTRY WILL SOON GRIND TO A HALT WHEN THEY RUN OUT OF URANIUM FUEL.

BREEDERS

© L. RIFAS



VESTED INTERESTS

THE EXPERTS, MEN WHO HAVE DEVOTED THEIR LIVES TO DEVELOPING NUCLEAR POWER, SAY IT'S SAFE!

IF THEY'VE DEVOTED THEIR LIVES TO PROMOTING NUCLEAR POWER, YOU CAN'T COUNT ON THEM TO BE OBJECTIVE, IMPARTIAL, OR UNBIASED ABOUT WHETHER WE NEED NUCLEAR POWER!

AFTER CAREFUL STUDY, OTHER EXPERTS SAY THAT IT'S NOT SAFE. IT'S NOT A DECISION FOR EXPERTS TO MAKE, THOUGH!!

NO EXPERT CAN SAY HOW MANY KILLOWATTS ARE WORTH HOW MANY CANCERS.

WHAT'S IT WORTH TO YOU?

BUT THE GOVERNMENT REGULATES NUCLEAR POWER. IF IT'S A BAD IDEA, THE GOVERNMENT WOULD HAVE STOPPED THEM.

NOT NECESSARILY. BEFORE 1975, THE ATOMIC ENERGY COMMISSION WAS RESPONSIBLE FOR BOTH REGULATING AND PROMOTING NUCLEAR POWER!

GO

SLOW

SOFT SOAP

AEC

THIS CONFLICT OF INTEREST PREVENTED THEM FROM EVEN SERIOUSLY CONSIDERING WHETHER TO ABANDON THE WHOLE NUCLEAR POWER PROGRAM.

IS IT WORTH IT?

BUT NUCLEAR POWER HAS TO COMPETE WITH COAL, GAS, AND OIL. WHY DON'T THE OIL COMPANIES SPEAK OUT AGAINST NUCLEAR POWER?

THEY HAD A DIFFERENT APPEAL. THEY BOUGHT MOST OF THE KNOWN URANIUM RESERVES!

GAS

THE OIL COMPANIES ARE TRYING TO MONOPOLIZE ALL ENERGY SOURCES—COAL, GAS, OIL, AND URANIUM.

COAL

URANIUM

OIL

GAS

HOW CAN NUCLEAR POWER BE MONOPOLIZED WHEN MONOPOLIES ARE ILLEGAL?

IT DOESN'T MATTER THAT IT'S ILLEGAL IF NOBODY ENFORCE THE LAW!

LAW

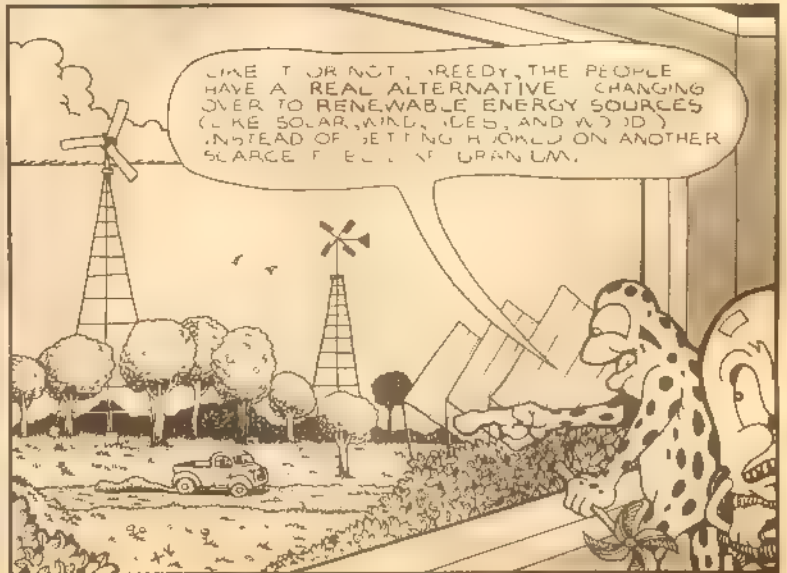
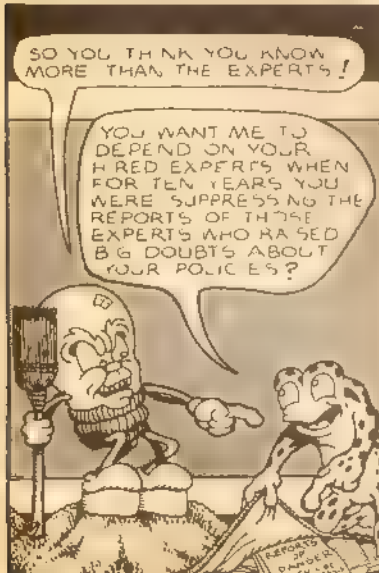
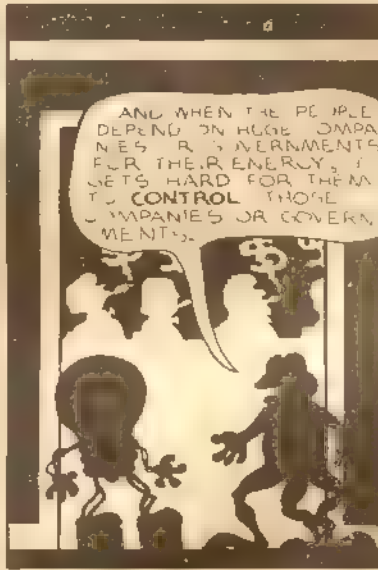
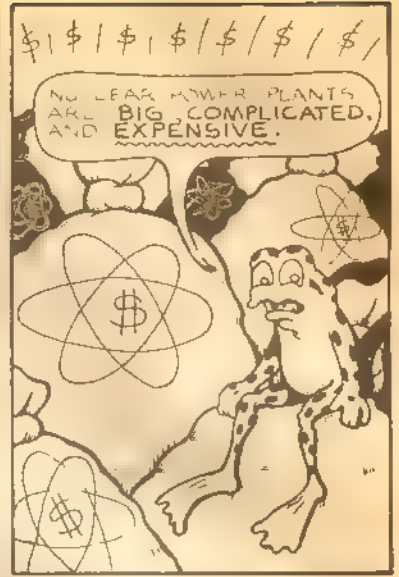
WELL, IF NUCLEAR POWER IS SO BAD, WHY HAVEN'T THE PEOPLE STOPPED IT?

IT'S ONLY RECENTLY THAT THE PEOPLE HAVE GOTTEN THE FACTS. THE NUCLEAR POWER PROGRAM WAS DEVELOPED IN A DARK, PRIVATE WORLD OF ATOMIC SECRECY.

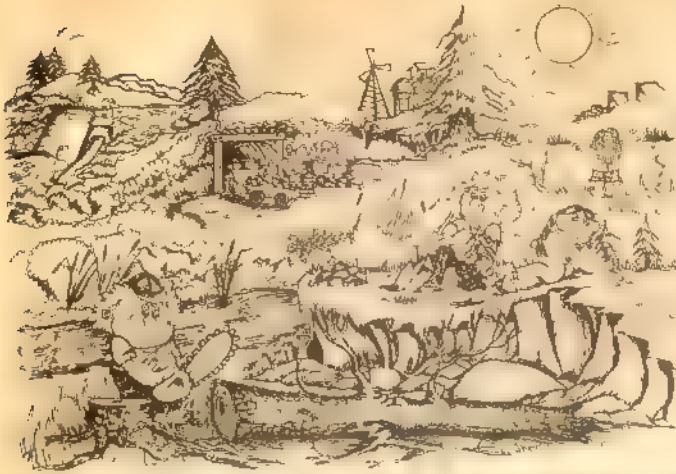
NOW THAT PEOPLE ARE FINDING OUT WHAT'S BEEN HAPPENING, A LOT OF RESPONSIBLE PEOPLE ARE WORKING TO STOP IT.

AT

ALTERNATIVES



FUN FACTS TO KNOW AND TELL ABOUT NUCLEAR POWER



RENEWABLE VS. NONRENEWABLE

ONE REASON SOMETIMES GIVEN FOR USING NUCLEAR POWER IS THAT WE ARE USING UP EARTH'S COAL AND OIL RESERVES. COAL AND OIL ARE **NONRENEWABLE** RESOURCES. THIS MEANS THAT THERE IS ONLY A CERTAIN AMOUNT OF THEM AND THE MORE WE BURN, THE LESS WE WILL HAVE LEFT. **RENEWABLE** ENERGY SOURCES ARE SOURCES OF ENERGY WHICH CAN REPLENISH THEMSELVES NATURALLY. SOME RENEWABLE ENERGY SOURCES ARE WOOD, TIDES, WIND, FALLING WATER, AND SUNLIGHT. HOW MUCH USE WE MAKE OF THESE SOURCES NOW DOES NOT LIMIT HOW MUCH OF THEM THERE WILL BE IN THE FUTURE. NUCLEAR POWER PLANTS BURN URANIUM FUEL. URANIUM IS A SCARCE NONRENEWABLE RESOURCE.

ILLUSTRATED BY DELORES THOM

FUN FACTS TO KNOW AND TELL ABOUT NUCLEAR POWER

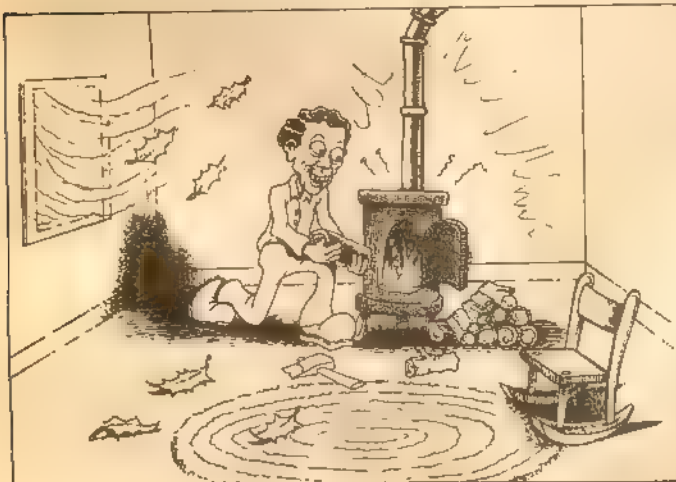
SILKWOOD

ON NOVEMBER 15, 1974 KAREN SILKWOOD WAS DRIVING TO MEET A REPORTER AND A LABOR UNION OFFICIAL IN OKLAHOMA CITY SHE HAD WITH HER A MANILA FOLDER FULL OF DOCUMENTS TO SUPPORT HER CHARGES THAT INSPECTION REPORTS AT THE PLUTONIUM PLANT WHERE SHE WORKED WERE BEING FALSIFIED. HER CAR RAN OFF THE ROAD AND SHE DIED. THERE IS EVIDENCE THAT HER CAR MAY HAVE BEEN FORCED OFF THE ROAD. AEC INVESTIGATORS LATER SUBSTANTIATED UNION ALLEGATIONS THAT INSPECTION REPORTS HAD BEEN FALSIFIED AND FOUND THAT 20 OF 39 UNION CHARGES ABOUT HEALTH AND SAFETY VIOLATIONS AT THE PLANT HAD MERIT IN WHOLE OR IN PART.



ILLUSTRATED BY RAY KOTT

FUN FACTS TO KNOW AND TELL ABOUT NUCLEAR POWER

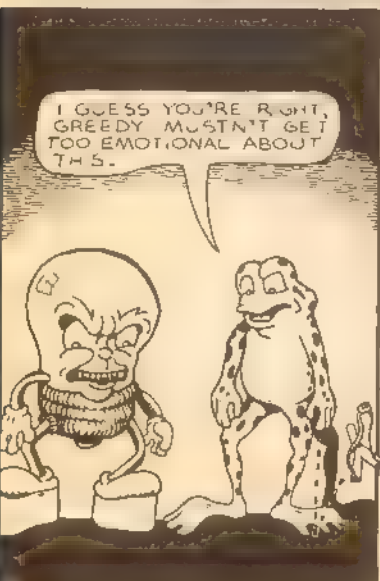
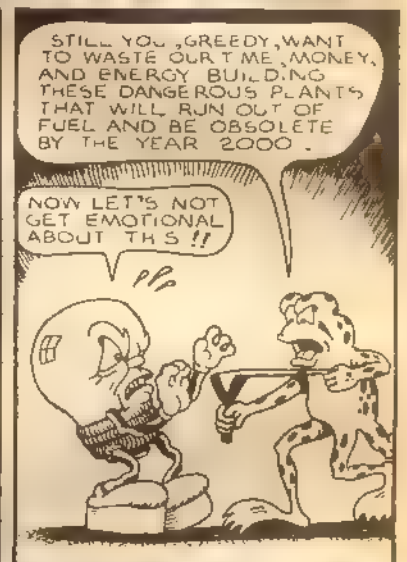
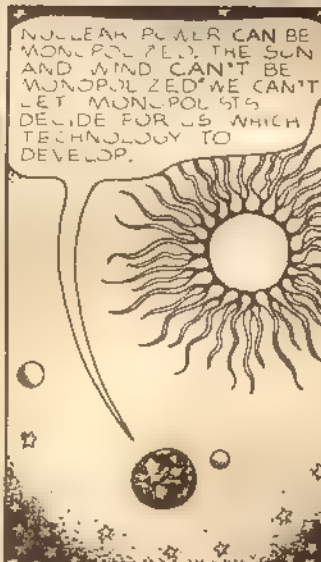
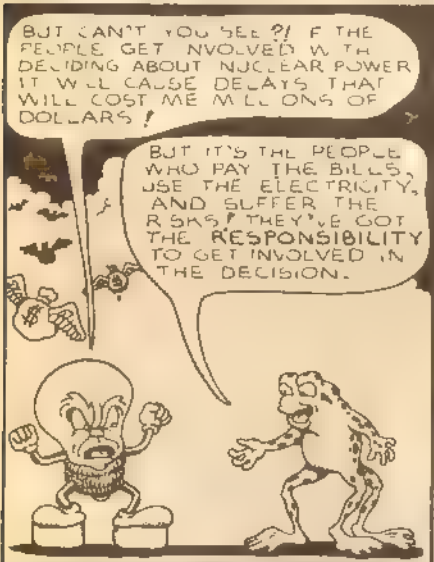
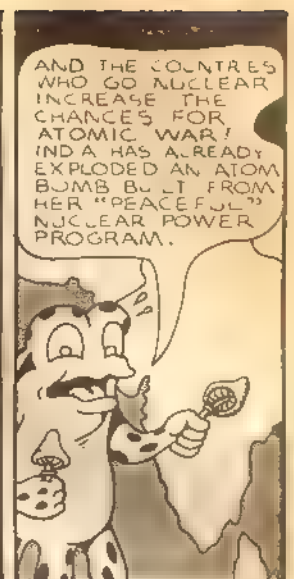
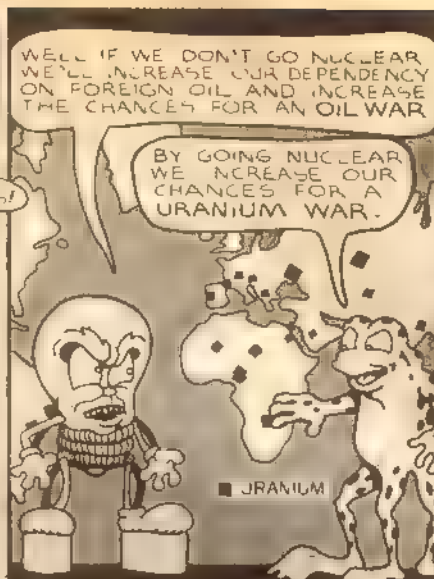
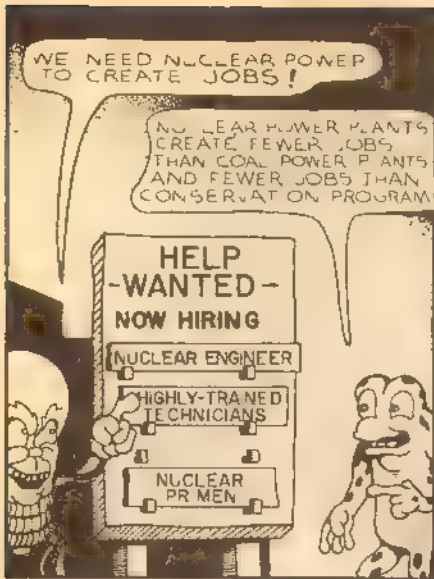


CONSERVATION

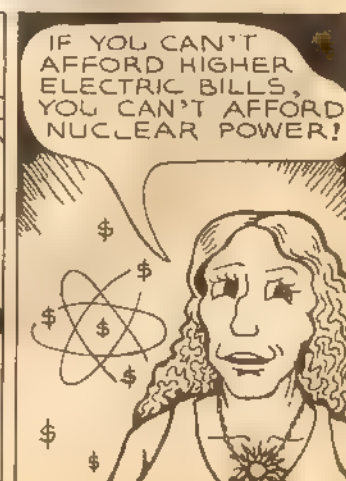
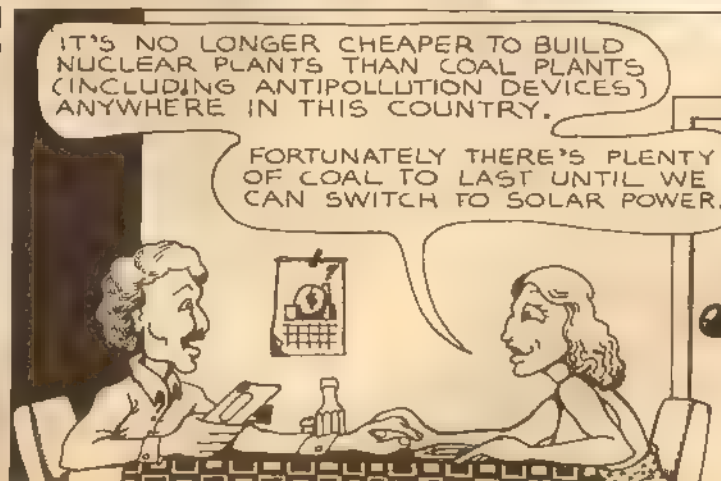
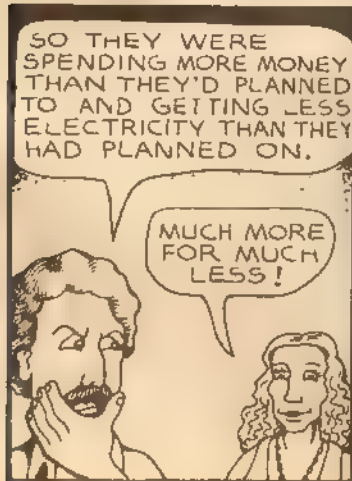
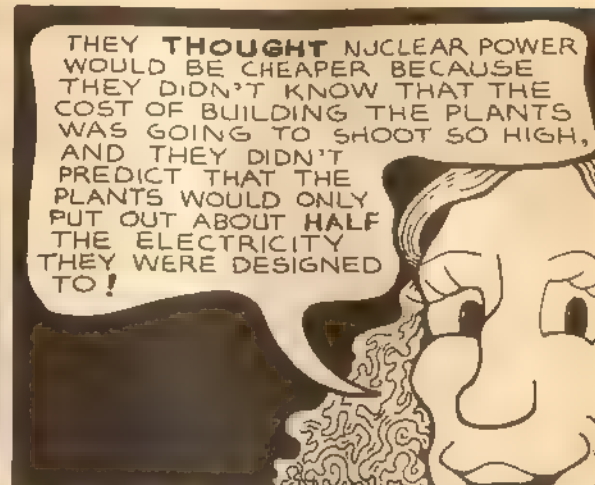
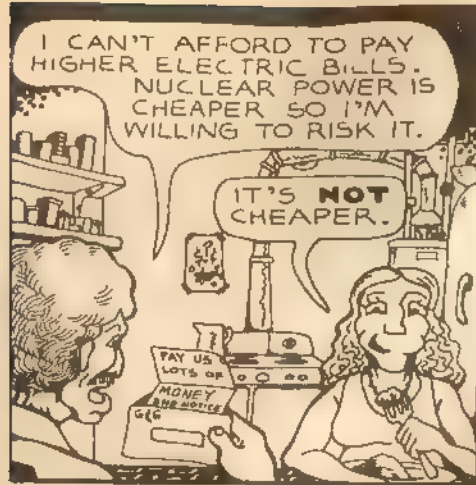
MANY PEOPLE THINK CONSERVING ENERGY ONLY MEANS DOING THINGS LIKE TURNING LIGHTS OFF WHEN THEY'RE NOT BEING USED OR TURNING DOWN THERMOSTATS. THE MORE IMPORTANT WAY TO CONSERVE ENERGY IS BY MAKING SURE THAT THE ENERGY WE USE IS USED EFFICIENTLY. FOR EXAMPLE, ENERGY IS WASTED WHEN IT'S USED TO HEAT BUILDINGS THAT ARE NOT PROPERLY INSULATED. **CONSERVES** ENERGY BY CONCENTRATING ON ELIMINATING WASTE INSTEAD OF ON CREATING MORE ENERGY TO BE USED IN THE SAME OLD WASTEFUL WAYS. WE CAN SAVE MONEY, CREATE MORE JOBS AND LESSEN POLLUTION PROBLEMS.

ILLUSTRATED BY LEONARD AND LARRY

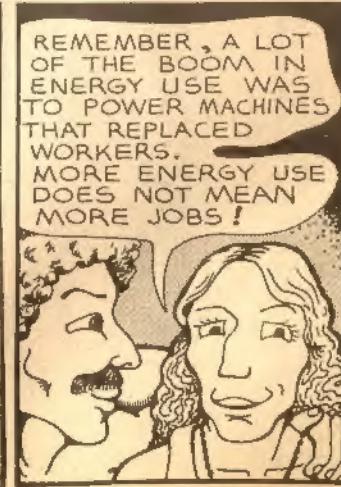
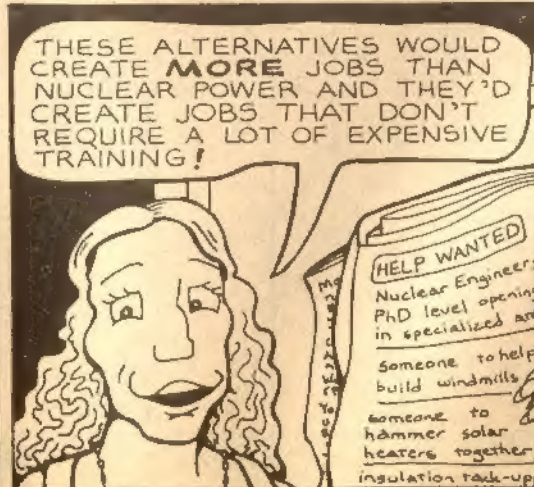
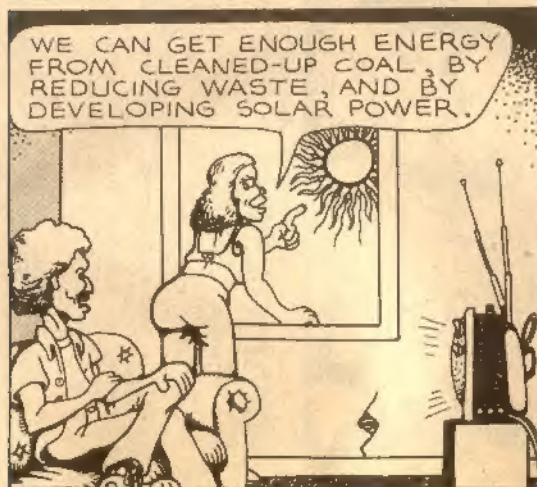
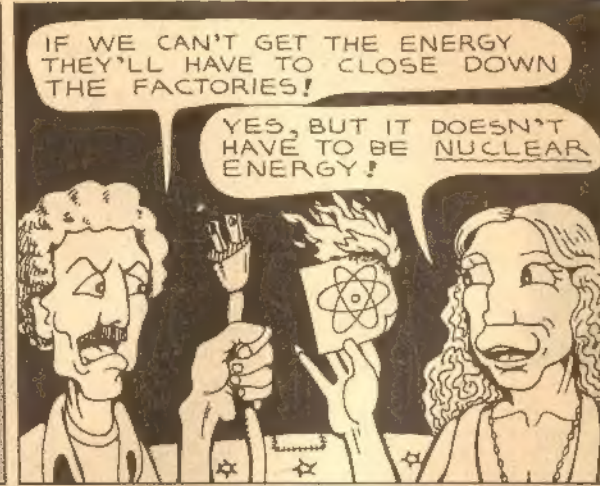
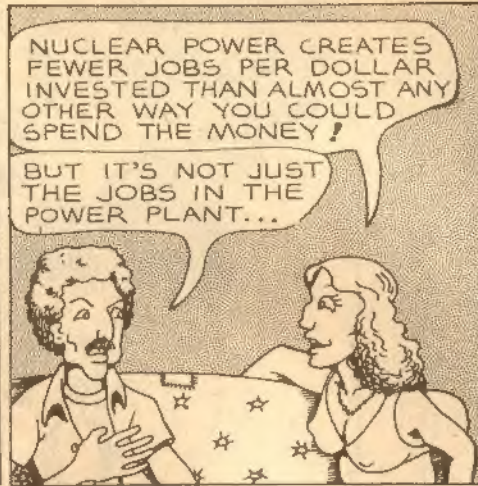
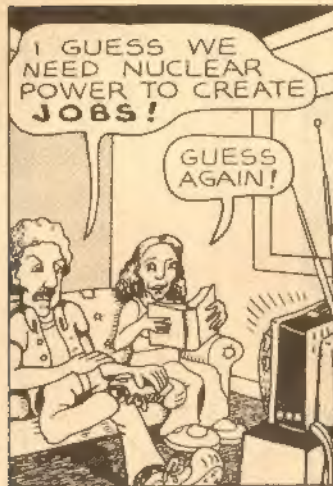
CONCLUSION



IS NUCLEAR POWER CHEAP?



DOES NUCLEAR POWER CREATE JOBS?



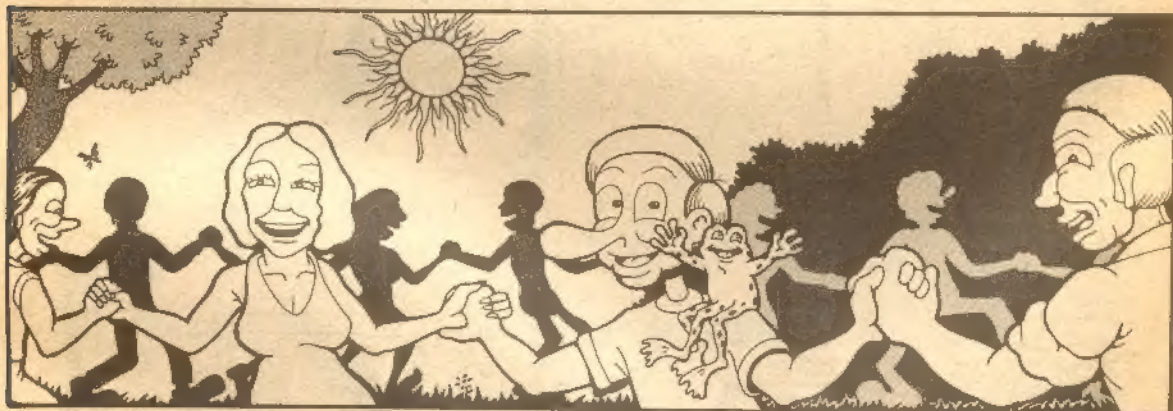
WORKING TOGETHER

ARGUMENTS WHICH PROVE NUCLEAR POWER TO BE MORE DANGEROUS AND EXPENSIVE THAN ALTERNATIVE ENERGY SOURCES ARE NOT ENOUGH TO STOP THE NUCLEAR POWER INDUSTRY. THE NUCLEAR INDUSTRY CAN BE EXPECTED TO CONTINUE ASKING THE GOVERNMENT FOR MONEY. THE GOVERNMENT ENERGY AGENCIES HAVE CLOSE TIES WITH THE NUCLEAR ENERGY CORPORATIONS AND ARE USUALLY SYMPATHETIC TO THEIR DEMANDS.

NEVERTHELESS, NUCLEAR POWER IS NOT INEVITABLE. CONCERNED CITIZENS HAVE PROVEN AGAIN AND AGAIN THAT WE CAN SUCCESSFULLY FIGHT TO DEFEND OURSELVES FROM THE PLANS OF THE ATOMIC ESTABLISHMENT.

PRO-NUCLEAR PROPAGANDISTS THREATEN THAT UNLESS WE RELY ON THEIR PRODUCT WE WILL SUFFER HIGHER ENERGY BILLS, FEWER JOBS, LESS POWER, AND MORE POLLUTION. THIS SEEMS TO MORE ACCURATELY DESCRIBE A FUTURE WITH NUCLEAR POWER PLANTS THAN WITHOUT THEM, HOWEVER.

IT IS POSSIBLE TO SUPPLY ALL THE PEOPLE OF EARTH WITH PLENTIFUL, CLEAN, SAFE, RELIABLE POWER FROM NON-NUCLEAR SOURCES BY CHANGING ENERGY POLICIES. THIS DREAM CAN'T JUST "HAPPEN". IT WILL BE ACCOMPLISHED ONLY BY JOINING TOGETHER TO MAKE IT HAPPEN. LET'S WORK TOGETHER FOR A WORLD WE CAN FEEL AT HOME IN!

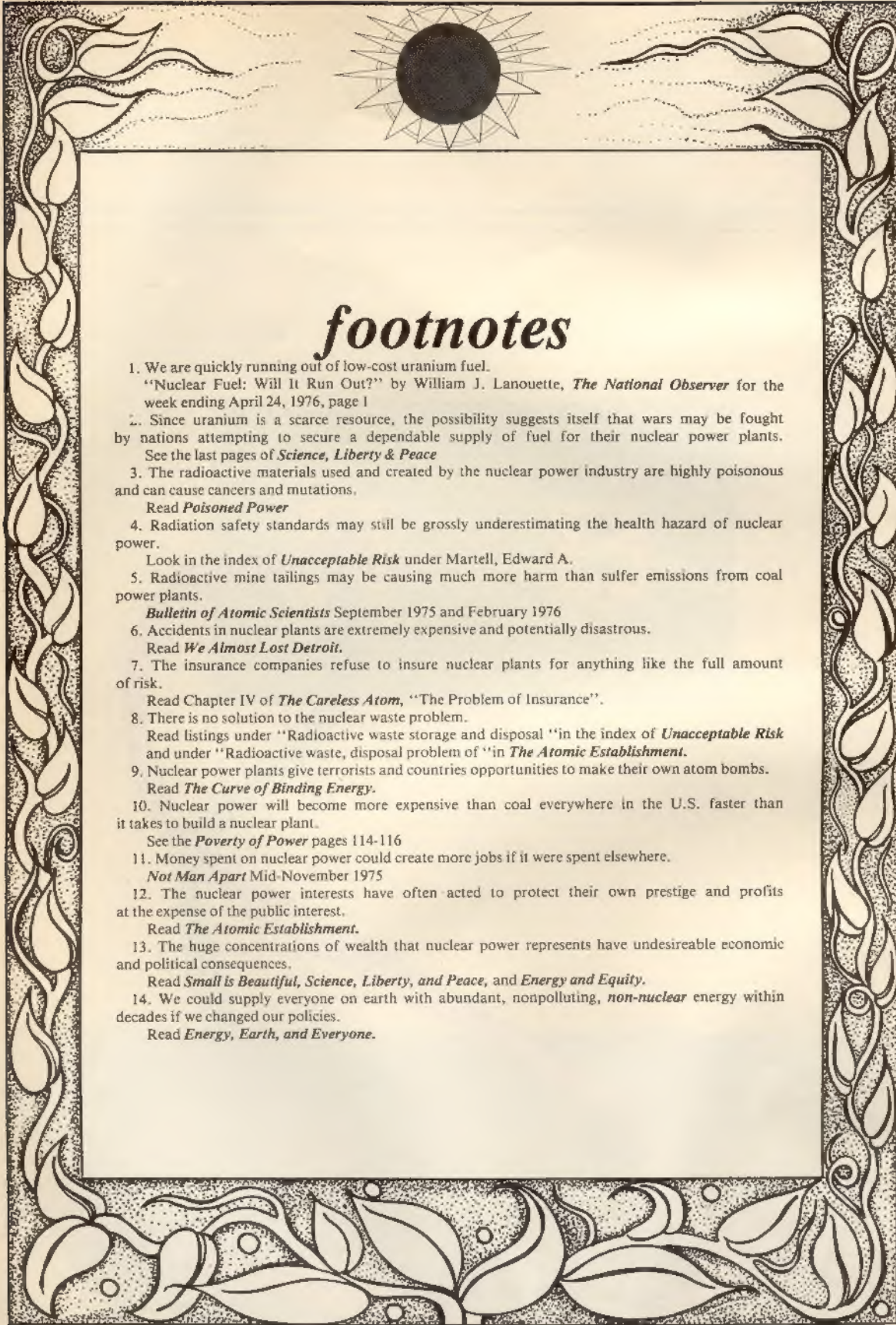


I HIGHLY RECOMMEND THESE BOOKS:
THE ATOMIC ESTABLISHMENT, H. PETER METZGER 1972
THE CARELESS ATOM, SHELDON NOVICK 1969
THE CURVE OF BINDING ENERGY, JOHN McPHEE 1975
POISONED POWER, JOHN GORMAN AND ARTHUR TAMPLIN 1971
UNACCEPTABLE RISK, MCKINLEY C. OLSON 1976
WE ALMOST LOST DETROIT, JOHN G. FULLER 1975
 AND THESE WHICH RELATE TO ENERGY PROBLEMS GENERALLY:
ENERGY, EARTH, AND EVERYONE, MEDARD GABEL 1975
ENERGY AND EQUITY, IVAN ILLICH 1974
THE POVERTY OF POWER, BARRY COMMONER 1976
SCIENCE, LIBERTY, AND PEACE, ALDUS HUXLEY 1946
SMALL IS BEAUTIFUL, E.F. SCHUMACHER 1973
 ALSO SEE THESE FINE PERIODICALS: → 1020-24 E. 58TH ST.
BULLETIN OF ATOMIC SCIENTISTS, CHICAGO, ILL. 60637
NOT MAN APART FROM FOE, 529 COMMERCIAL, S.F., CALIF., 94111
 FINALLY I RECOMMEND THE **EARS** CATALOGUE OF
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footnotes

1. We are quickly running out of low-cost uranium fuel.
"Nuclear Fuel: Will It Run Out?" by William J. Lanouette, *The National Observer* for the week ending April 24, 1976, page 1
2. Since uranium is a scarce resource, the possibility suggests itself that wars may be fought by nations attempting to secure a dependable supply of fuel for their nuclear power plants.
See the last pages of *Science, Liberty & Peace*
3. The radioactive materials used and created by the nuclear power industry are highly poisonous and can cause cancers and mutations.
Read *Poisoned Power*
4. Radiation safety standards may still be grossly underestimating the health hazard of nuclear power.
Look in the index of *Unacceptable Risk* under Martell, Edward A.
5. Radioactive mine tailings may be causing much more harm than sulfur emissions from coal power plants.
Bulletin of Atomic Scientists September 1975 and February 1976
6. Accidents in nuclear plants are extremely expensive and potentially disastrous.
Read *We Almost Lost Detroit*.
7. The insurance companies refuse to insure nuclear plants for anything like the full amount of risk.
Read Chapter IV of *The Careless Atom*, "The Problem of Insurance".
8. There is no solution to the nuclear waste problem.
Read listings under "Radioactive waste storage and disposal" in the index of *Unacceptable Risk* and under "Radioactive waste, disposal problem of" in *The Atomic Establishment*.
9. Nuclear power plants give terrorists and countries opportunities to make their own atom bombs.
Read *The Curve of Binding Energy*.
10. Nuclear power will become more expensive than coal everywhere in the U.S. faster than it takes to build a nuclear plant.
See the *Poverty of Power* pages 114-116
11. Money spent on nuclear power could create more jobs if it were spent elsewhere.
Not Man Apart Mid-November 1975
12. The nuclear power interests have often acted to protect their own prestige and profits at the expense of the public interest.
Read *The Atomic Establishment*.
13. The huge concentrations of wealth that nuclear power represents have undesirable economic and political consequences.
Read *Small is Beautiful, Science, Liberty, and Peace*, and *Energy and Equity*.
14. We could supply everyone on earth with abundant, nonpolluting, non-nuclear energy within decades if we changed our policies.
Read *Energy, Earth, and Everyone*.

PLEASE AN EXTRA WARNING FOR YOU CAREFUL READER: E.P. SCHWABER HAS WRITTEN THAT "NATURE ALWAYS GOES TO SPAIN, KNOWS WHERE AND WHEN TO STOP, GREATER EVEN THAN THE MYSTERY OF NATURAL GROWTH IS THE MYSTERY OF THE NATURAL CESSATION OF GROWTH. THERE IS NO SUCH THING AS NATURAL THINGS IN THEIR SIZE, SPEED OR VIOLENCE. WE ARE NOT A SYSTEM OF NATURE, OF WHICH MAN IS A PART, TENDS TO BE SELF-BALANCING, SELF-ADJUSTING, SELF-CLEANING." TECHNOLOGY RECOGNIZES NO SUCH PRINCIPLE. IN TERMS, FOR INSTANCE, OF SIZE, SPEED OR VIOLENCE IT DOES NOT POSSESS THE VIRTUES OF BEING SELF-BALANCING, SELF-ADJUSTING, SELF-CLEANING." SCHWABER DOES NOT GET BOGGED DOWN WITH A "YES OR NO" DEBATE, BUT INSTEAD, OFFERS MUCH INSIGHT INTO THE QUESTIONS: WHAT KIND OF GROWTH FOR WHOSE BENEFIT, AND UNDER WHOSE CONTROL? HE MOSTLY IGNORED THE "GROWTH OR NO-GROWTH" CONTROVERSY BECAUSE NUCLEAR POWER APPEARS TO BE SUCH AN INEFFICIENT USE OF CAPITAL, AND UNRELIABLE SOURCE OF POWER THAT EVEN "TED GROWTH" SHOULD STOP IT.

